CLAIMS

1. A method for preparing stable oligosaccharides from a glycoprotein having linked oligosaccharides, said method comprising the steps o

contacting said glycoprotein with an aqueous solution of ammonium hydroxide and ammonium carbonate for a period of time sufficient to cleave linked oligosaccharides from the glycoprotein to form oligosaccharide products and a protein by-product;

separating the oligosaccharide products from the ammonium hydroxide and the ammonium carbonate; and

separating at least a portion of the oligosaccharide products from the protein by-product.

2. The method of claim 1 further comprising the step of contacting the oligosaccharide products with an aqueous acid.

3. The method of claim 2 wherein the acid is boric acid.

4. The method of claim 2 further comprising the step of separating the oligosaccharide products from the acid.

5. The method of claim 3 further comprising the step of separating the oligosaccharide products from the acid.

6. The method of claim 1 further comprising the step of separating at least one oligosaccharide products from other oligosaccharide products.

7. The method of claim 2 further comprising the step of separating at least one oligosaccharide products from other oligosaccharide products.

8. The method of claim 3 further comprising the step of separating at least one oligosaccharide products from other oligosaccharide products.

9. The method of claim 4 further comprising the step of separating at least one oligosaccharide products from other oligosaccharide products.

10. The method of claim 5 further comprising the step of separating at least one oligosaccharide products from other oligosaccharide products.

11. The method of claim 1 further comprising the step of reacting the separated oligosaccharide products with a labeling agent to form a mixture of oligosaccharide derivatives having a common covalently bound label.

12. The method of claim 2 further comprising the step of reacting the separated oligosaccharide products with a labeling agent to form a mixture of oligosaccharide derivatives having a common covalently bound label.

13. The method of claim 3 further comprising the step of reacting the separated oligosaccharide products oligosaccharides with a labeling agent to form a mixture of oligosaccharide derivatives having a common covalently bound label.

14. The method of claim 4 further comprising the step of reacting the separated oligosaccharide products with a labeling agent to form a mixture of oligosaccharide derivatives having a common covalently bound label.

15. The method of claim 5 further comprising the step of reacting the separated oligosaccharide products oligosaccharides with a labeling agent to form a mixture of oligosaccharide derivatives having a common covalently bound label.

16. The method of claim 11 further comprising the step of separating at least one labeled oligosaccharide derivative from other labeled oligosaccharide derivatives.

17. The method of claim 12 further comprising the step of separating at least one labeled oligosaccharide derivative from other labeled oligosaccharide derivatives.

18. The method of claim 13 further comprising the step of separating at least one labeled oligosaccharide derivative from other labeled oligosaccharide derivatives.

19. The method of claim 14 further comprising the step of separating at least one labeled oligosaccharide derivative from other labeled oligosaccharide derivatives.

20. The method of claim 15 further comprising the step of separating at least one labeled oligosaccharide derivative from other labeled oligosaccharide derivatives.

21. A method for preparing stable reducing oligosaccharides by cleavage of a glycoprotein having linked oligosaccharides, said method comprising the steps of

contacting the glycoprotein with an aqueous solution of ammonium hydroxide and ammonium carbonate to cleave the linked glycans and from intermediate product oligosaccharide products and cleaved protein by-products;

separating the intermediate products from the aqueous ammonium hydroxide and ammonium carbonate;

reacting the intermediate oligosaccharide products with aqueous boric acid to form reducing oligosaccharide products; and

separating at least a portion of the reducing oligosaccharide products from the aqueous boric acid and the protein by-products.

22. The method of claim 21 wherein the step of separating the aqueous ammonium hydroxide and ammonium carbonate from the intermediate oligosaccharide products is carried out by evaporation of aqueous solutions of the products and those reagents.

23. The method of claim 21 wherein the reducing oligosaccharide products are separated from the boric acid by evaporation of methanol solutions of the product mixture.

24. The method of claim 21 further comprising the step of separating at least one reducing oligosaccharide product from the other reducing oligosaccharide products.